



Preface

On behalf of CEDR (Conference of European Directors of Roads) and ERTRAC (European Road Transport Research Advisory Council) it is our great pleasure to invite you to the Third Transport Research Arena, the TRA 2010, which will take place in Brussels, Belgium, from 7th to 10th June 2010.

With the valuable support of the Flemish Roads and Traffic Agency, the Directorate-General Roads and Buildings of the Walloon Public Services, Brussels Mobility of the Brussels Capital Region and the Federal Public Service, Transport and Mobility, TRA 2010 provides the opportunity for all stakeholders involved in transport research to come together and present their findings, discover innovations and discuss the challenges facing Europe today in the road transport sector.

With the help of the pillar leaders, their deputies and all the members of the Programme Committee a varied programme has been established around the main theme of TRA 2010, *Sustaining Road Transport Mobility through innovation in Europe*. Discussions on a higher level, strategic views as well as interesting research results are presented. The focus is put on quality and innovation all in the scope of the Greener, Safer and Smarter transport. These three main topics, which are in line with the highest priorities in Europe and around the world, are reflected in the plenary, strategic as well as thematic sessions.

TRA 2010 concentrates on the challenges for transport through the six pillars built around the European research and innovation strategies and embracing key issues on urban and inter-modal transport and translated into the programme while emphasising on climate change, CO₂, fuel efficiency and supply:

- I. European Road Research Needs and Agendas.
- II. Transport, Mobility and Infrastructure.
- III. Safety and Security.
- IV. Energy, Environment and Resources.
- V. Design and Production (Vehicles and Infrastructure)
- VI. Societal Importance of Road Transport.

The Transport Research Arena conference welcomes the young researchers through the YEAR 2010 competition, the Young European Arena of Research, in which early-stage researchers are given the opportunity to showcase their work to experts on the field. A jury of eminent reviewers has selected the best 50 applicants to present their work at TRA 2010 in Brussels.

TRA 2010 received more than 230 papers from which 200 will be presented in a strategic, thematic and interactive poster sessions. TRA 2010 also forms the forum for different research teams to present their work in a special session dedicated to their project. These sessions will take place in parallel with the thematic sessions or at the end of TRA 2010. We do hope you will enjoy TRA 2010 and your stay in Brussels.

Claude Van Rooten
Chairman Programme Committee

Chris Caestecker
Chairman Management Committee

LIST OF COMMITTEES

TRA 2010 management Committee

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Mr. <i>Sylvain Haon</i>	Director of Polis network, co-leader ERTRAC Urban Mobility working group
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Mr. <i>Etienne Willame</i>	Chairman of the TRA 2010 Organizing Committee

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Mr. Goran Wirmark	ERTRAC, EUCAR, Volvo (Sweden)
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Mr. Luc Swartebroeckx	Brussels Mobility (Brussels, Belgium)

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Mr. Jan Deconinck	HRG Belgium
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Paper No. 11.2.3

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Abstract

A single layered continuously reinforced concrete pavement with exposed aggregate surface, consists of one concrete layer laid in one or more strips of concrete, separated by longitudinal joints parallel to the lanes, and generally with anchoring abutments at the ends of it. The exposed aggregate surface is obtained by spraying a setting retarder on the fresh concrete surface. The technique of "double layered" continuously reinforced concrete pavement is applied either to achieve a high quality top layer, either for less quality (and thus cheaper) materials to be used in the lower layer, or for both reasons. The construction is done in two phases and allows the use of recycled concrete rubble of the original pavement in the lower layer. The double benefit of cheaper aggregates and a quieter and smoother surface is a strong asset in the field of sustainable construction.